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|--|-------------|----------------------|---------------------|------------------|
| 10/537,885   | 06/07/2005  | Benoit Agnus         | FR02 0137 US        | 7222             |
| 65913  | 7590        | 07/23/2010           | EXAMINER            |                  |
| NXP, B.V.<br>NXP INTELLECTUAL PROPERTY & LICENSING<br>M/S41-SJ<br>1109 MCKAY DRIVE<br>SAN JOSE, CA 95131 |             |                      | PHAM, TUAN          |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2618                |                  |
|  |             |                      | NOTIFICATION DATE   | DELIVERY MODE    |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/537,885 | <b>Applicant(s)</b><br>AGNUS ET AL. |  |
|                              | <b>Examiner</b><br>TUAN A. PHAM      | <b>Art Unit</b><br>2618             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments, see Applicant's remark, filed on 10/27/2009, with respect to the rejection(s) of claim(s) 2, 6 and 9 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

#### **(I) Applicant's argument:**

In response to applicant's remark on pages 6-8, Applicant argues that Examiner has fails to combine Henriksson and Hane and further fails to establish a prima facie.

In response to applicant's arguments, Examiner respectfully disagrees with the applicant's argument. It appears that Applicant is attacking individual merits of Henriksson and Hane and concludes that there is no impetus to combine them. However, one must consider **the combination of references as a whole** under a 103 rejection. One cannot show non-obviousness by attacking references individually. In re Keller, 208 USPQ 871 (CCPA 1981). The test for obviousness is not whether features of one reference may be bodily incorporated into the other to produce claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in pertinent art. In re Bozek, (CCPA) 163 USPQ 545. The question in a rejection for obviousness on a combination of references is what secondary reference would teach one skilled in the art and not whether its structure could be bodily substituted in basic reference structure. In re Richman, 165 USPQ 509 (CCPA 1970). In this regard, the intent of Hane as a secondary teaching is not to combine its structural into

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Henriksson's structure, but rather to combine the known features of Hane with the known features of Henriksson to provide the same function as applicant's invention.

KSR Int'l v. Teleflex, Inc., 127 S. Ct. 1727 (2007), obviousness of claimed subject matter involving a combination of known features. In addition, the Applicant's invention is directed to test the transmission channel in the integrated circuit, and further include the tester integrate with the IC. Henriksson teaches a test device for testing the transmitter and receiver which can be integrated microcircuit (see page 2, ln.6-8), and the test unit can be integrated directly into a microcircuit with the transceiver (see [0026]). On the other hand, Hane teaches wireless transmitter/receiver unit measure both phase and amplitude. Since both of the prior art related to the wireless environment and both of the prior art includes each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single art reference. The result of the combination would have been predictable and the resulted in modifying the test device of Henriksson to include all the elements of Hane thereby allowing to test the wireless signal in the transceiver. Examiner, see no reason why ordinary skilled artisans could not include the feature of Henriksson to combine with the feature of Hane that would inherently provide the same function of applicant's invention. Therefore, there is an existing a strong prima facie case of obviousness under 35 U.S.C 103, and proper to combine Henriksson and Hane.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. **Claims 1, 4-5, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henriksson, Markku (WO 02/13427 A1, hereinafter, "Henriksson") in view of Hane (Patent No.: US 4,728,955).**

**Regarding claims 1, 5, and 8,** Henriksson teaches an integrated circuit and method comprising (see figure 2, test module 200, [0005]):

a signal transmission channel (TX) including radio frequencies (see figure 2, transmitter 200 transmit the RF signal to base station); and

an integrated tester to test radio characteristics of said integrated circuit (see figure 2, transmitter 100, test module 200, a test module 200 for testing the transmitter

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and receiver which can be integrated microcircuit [0005, 0012]), wherein the tester is independent of the signal transmission channel (see figure 2, it is clearly seen that the test module 200 is separated from the transmission path).

It should be noticed that Henriksson fails to teach first means for recovering a part of a signal generated by the transmission channel (TX) at a first frequency, second means for converting said recovered signal from the first frequency into a second frequency, an amplifier for amplifying said signal at this second frequency, and a rectifier for rectifying said signal. However, Hane teaches first means for recovering a part of a signal generated by the transmission channel (TX) at a first frequency (see figure 10, directional coupling 15, col.6, ln.48-65), second means for converting said recovered signal from the first frequency into a second frequency (see figure 10, mixer 21, col.6, ln.48-65), an amplifier for amplifying said signal at this second frequency (see figure 10, amplifier 25', col.6, ln.48-65), and a rectifier for rectifying said signal (see figure 10, rectifier 30, col.6, ln. 48-65, it is clearly seen that the coupling 15, mixer 21, amplifier 25', and rectifier 30 are separate path from transmission path). Since both of Henriksson and Hane teach a transceiver. Henriksson further disclose a test module. **It is well known in the art to combine the known elements such as a coupler, mixer, amplifier, and rectifier into the test module of Henriksson to arrive the claimed invention. Also see explain in the response above.**

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hane into view of Henriksson in order to test the wireless signal in the transceiver.

**Regarding claim 4**, Hane further teaches the first frequency is a radio frequency and the second frequency is a low frequency (see figure 10, col.6, ln.42-65, receive  $F_o + F_m$ , output from mixer 17 is only  $F_m$ ).

**Regarding claim 11**, Henriksson further teaches a tester (see figure 2, test module 200).

**4. Claims 2, 12-13, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henriksson, Markku (WO 02/13427 A1, hereinafter, “Henriksson”) in view of Hane (Patent No.: US 4,728,955) as applied to claims 1, 5, and 8 above, and further in view of Johnson (Patent No.: US 6,766,150).**

**Regarding claims 2, 6, and 9**, Henriksson and Hane, in combination, fails to teach detection means for detecting the validity of the signal generated by the transmission channel. However, Johnson teaches detection means for detecting the validity of the signal generated by the transmission channel (see figure 3, filter calibration 365, col.9, ln.34-63, filter calibration 365 compare the feedback generate from the transmission with the value of the signal to generate the control signal for transmission).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Johnson into view of Henriksson and Hane in order to adjust the control voltage for the transmission as suggested by Johnson at col.9, ln.34-63.

**Regarding claims 12**, Henriksson and Hane, in combination, fails to teach configured to output a comparison signal separately from said signal transmission channel. However, Johnson teaches configured to output a comparison signal separately from said signal transmission channel (see figure 4, calibrator controller 365 compare the calibrator in the feedback loop that separated from the transmit path, see col.9, ln.34-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Johnson into view of Henriksson and Hane in order to adjust the control voltage for the transmission as suggested by Johnson at col.9, ln.34-63.

**Regarding claims 13**, Johnson further teaches configured to output the comparison signal along a signal path separate from an antenna signal path (see figure 4, calibrator controller 365 compare the calibrator in the feedback loop that separated from the antenna, see col.9, ln.34-43).

**Regarding claims 17 and 20**, Johnson further teaches outputting a comparison signal separately from said signal transmission channel along a signal path separate from an antenna signal path (see figure 4, calibrator controller 365 compare the calibrator in the feedback loop that separated from the transmit path and antenna, see col.9, ln.34-43).



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**5. Claims 3, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henriksson, Markku (WO 02/13427 A1, hereinafter, "Henriksson") in view of Hane (Patent No.: US 4,728,955) as applied to claims 1, 5, and 8 above, and further in view of Cabot (Patent No.: US 5,136,267).**

Regarding claims 3, 7 and 10, Henriksson and Hane, in combination, fails to teach filter for filtering harmonics signal. However, Cabot teaches filter for filtering harmonics signal (see col.4, ln.1-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Cabot into view of Henriksson and Hane in order to reduce the interference.

**6. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henriksson, Markku (WO 02/13427 A1, hereinafter, "Henriksson") in view of Hane (Patent No.: US 4,728,955) as applied to claims 1 and 5 above, and further in view of Kim et al. (Patent No.: US 6,313,644, hereinafter, "Kim").**

Regarding claims 14 and 18, Henriksson and Hane, in combination, fails to teach said first means is further configured to recover about 1/1000 of the signal generated by the transmission channel, wherein the first means possesses an attenuation of about 30 dB. However, Kim teaches said first means is further configured to recover about 1/1000 of the signal generated by the transmission channel, wherein the first means possesses an attenuation of about 30 dB (see col.2, ln.21-32).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kim into view of Henriksson and Hane in order to improve the transmission.

**7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henriksson, Markku (WO 02/13427 A1, hereinafter, "Henriksson") in view of Hane (Patent No.: US 4,728,955), and Johnson (Patent No.: US 6,766,150) as applied to claim 1 above, and further in view of Rodgers et al. (Pub. No.: US 2002/0011932, hereinafter, "Rodgers").**

**Regarding claim 15**, Henriksson, Hane, and Johnson, in combination, fails to teach the detection means is configured to detect the validity of a power level of the signal generated by the transmission channel to verify that the power level is within an expected range. However, Rodgers teaches the detection means is configured to detect the validity of a power level of the signal generated by the transmission channel to verify that the power level is within an expected range (see [0066]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Rodgers into view of Henriksson, Hane and Johnson in order to improve the transmission.

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**8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henriksson, Markku (WO 02/13427 A1, hereinafter, "Henriksson") in view of Hane (Patent No.: US 4,728,955), Johnson (Patent No.: US 6,766,150) and Rodgers et al. (Pub. No.: US 2002/0011932, hereinafter, "Rodgers") as applied to claim 1 above, and further in view of Gilmore (Patent. No.: US 5,028,887).**

Regarding claim 16, Henriksson, Hane, Johnson and Rodgers, in combination, fails to teach the detection means is configured to detect a spectral purity of the signal generated by the transmission channel. However, Gilmore teaches the detection means is configured to detect a spectral purity of the signal generated by the transmission channel (see claim 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Gilmore into view of Henriksson, Hane, Johnson and Rodgers in order to improve the transmission.

**9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henriksson, Markku (WO 02/13427 A1, hereinafter, "Henriksson") in view of Hane (Patent No.: US 4,728,955) as applied to claim 5 above, and further in view of Rodgers et al. (Pub. No.: US 2002/0011932, hereinafter, "Rodgers").**

Regarding claim 19, Henriksson and Hane, in combination, fails to teach the detection means is configured to detect the validity of a power level of the signal generated by the transmission channel to verify that the power level is within an expected range. However, Rodgers teaches the detection means is configured to detect

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the validity of a power level of the signal generated by the transmission channel to verify that the power level is within an expected range (see [0066]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Rodgers into view of Henriksson and Hane in order to improve the transmission.

### **Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Pham whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Primary Examiner, Art Unit 2618